369 Reconsidering self-care: a sociological response to CF research

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Objective: To review existing (CF) self-care research and explore the possibilities of a more sociologically informed approach.
Method: A search of medical and social science research databases was undertaken using the key words 'cystic fibrosis' and 'self-care' (along with synonyms and related concepts). Key texts were then compared and analysed thematically.
Results: Despite growing discomfort with traditional models of compliance, CF research seldom explores alternative approaches to research and practice. Of particular concern was the overwhelming emphasis upon quantitative outcome-based studies and a concomitant lack of qualitative research on the process of self-care, particularly among adults. The lack of significance assigned to the social and cultural conditions in which self-care is undertaken also needs to be addressed. Starting with the methodological issue of representing patients in research and then reviewing some relevant findings, an alternative sociological approach that helps contextualise varieties of preferred styles of self-care is finally suggested.
Conclusion: While CF research has been slow in responding to changing ideological trends, traditional compliance models remain valuable tools for clinicians. However, alternatives such as 'concordance' should also be considered where appropriate. This review suggests a pluralistic approach is required which by paying attention to how various identities are socially constructed and performed, will enable clinicians to recognise a variety of distinct styles of self-care. These affect possible outcomes rather than determine them and therefore provide a range of frameworks for enabling a more sensitive engagement with patients.

370 Variation in bias of self-reported adherence to nebulisers in adults with Cystic Fibrosis

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Self-report methods to assess adherence to medication have been widely used but criticised as potentially overestimating adherence. This study assesses agreement between objective adherence to nebulised therapy, measured by three months of data downloaded from the i-neb (Phillips UK), and self-reported adherence in 78 patients. Median objective adherence was 36%(IQR 5–84.5)of prescribed regimen, paired t-test and associated confidence interval(CI) gave assessment of mean upward bias of self-report at 25.3 (18.7–31.9).
Data was split according to objective adherence. Paired t-test(CI)used to assess mean bias of patient report for each group. For 33 subjects, objective adherence 0–25%, mean bias was 42.4 (32.0–52.7). Fifteen participants, with 26–50% adherence, demonstrated mean bias of 32.1 (20.3–44) using self report. Bias of self report dropped to 17.5 (6.9–28.1) in eight patients with 51–75% adherence and was minimal at 6.1 (0.6–11.6) in 13 participants with 76–100% adherence. Nine patients reported 100% adherence with objective adherence of over 100%, mean bias −13.9 (−21.5 to −6.26). These patients identified a prescription which matched medical record suggesting this was not due to misunderstanding of prescription.
This data shows high tendency to to have greater upward bias in estimation where objective adherence is low (0–25%). This tendency continues but decreases as objective adherence improves and is minimal in people with objective adherence of 76–100%. People with over 100% adherence to prescribed treatment have a significant and consistent tendency to underestimate adherence levels. Self reported adherence does not provide accurate adherence data for each individual compared to electronic monitoring.

371* Exploration of personality, psychosocial factors and illness effect on adherence behaviour in CF

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Adherence to treatment is influenced by many factors and is critical to optimal Cystic Fibrosis (CF) management. Adherence to treatment plans in CF is reported to occur less than 50% of the time. Psycho-social factors are beginning to emerge as strong predictors of adherent behaviour. In addition, both severity of disease and illness state (eg inpatient) may affect subjective responses to surveys.
Aim: To explore both personality and psychosocial factors and their impact on adherence behaviour in patients with CF. To explore the impact of illness effect and severity effect on adherence behaviour reporting.
Methodology: Demographic and health related measures were collected in addition to a battery of self-administered and pharmacist administered questionnaires investigating personality (NEO-PI), psychosocial (depression, anxiety, social support, locus of control, quality of life, health beliefs) and adherence behaviour (Morisky score, pharmacy pick-up) were given to each patient requiring an inpatient admission for an exacerbation of their CF. All tests were re-administered 4 weeks following their in-patient admission in a stable phase.
Results: The study recruited 12 participants. Results indicate that both illness and severity of illness impact upon adherence behaviour reporting. The psychosocial factors related to reported adherence were social support ($p < 0.05$), health beliefs ($p < 0.05$), health related quality of life ($p < 0.05$), treatment burden ($p < 0.05$) and social functioning ($p < 0.05$). Also financial perception influenced adherence reporting.
Conclusion: Adherence behaviour is complex, involves multiple factors and is subject to specific biases. Further investigation into understanding the contribution of psychosocial factors to adherence behaviour is important.

372 Open monitoring of adherence; is it better in those patients who bring their device for download?

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Introduction: Adaptive Airway Delivery(AAD) devices are now routinely used in many clinics for antibiotic inhalation therapy. Adherence is readily calculated but is dependant upon the device being brought to clinic to be downloaded. The aim of this study was to examine whether adherence differed in the months that patients brought their AAD devices to clinic.
Methods: Chronic Pseudomonas growths are treated in our clinic with inhaled colistin via an AAD device (I-neb, Respironics). All families are asked to bring their device to each clinic. Using software provided by the manufacturers, data on the device was downloaded and monthly adherence to inhalation therapy calculated for each patient over a 2 year period. The frequency with which the device was brought to clinic and treatment times were also documented.
Results: Adherence data for 16 children (age range 4–15 years) have been analysed. Median(range) number of clinic attendances over this period was 11(range 9–14) for each patient. The devices were brought to clinic approximately 50% of the time. Mean adherence to inhaled treatment was significantly higher in the months that the AAD device was brought to clinic (Mean(SD), 79(24)%) compared to the months where it was left at home (72(27)%; $p < 0.001$). Overall median treatment times of 5 minutes did not vary between the months it was downloaded and the months it was not.
Conclusions: Adherence to inhaled therapy is better in the months that patients bring their AAD devices to clinic. Whether this is because adherence improves in anticipation of clinic or whether it improves following feedback at clinic is an area for further investigation.